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ABSTRACT

This pilot study examined, from a dynamic systems perspective, changes in maternal/child discourse behaviors across repeated readings of a storybook. Four Caucasian children (2 boys, 2 girls), ranging in age from 2 years 7 months to 2 years 10 months, were videotaped reading unfamiliar storybooks with their mothers. The videotapes were transcribed, and maternal and child behaviors were coded on several dimensions. Maternal behaviors were topic control, turn control (control of mother and child taking turns reading), and use of decontextualized language. Child discourse behaviors were topic control, turn control, lexical diversity, and decontextualized language. After 10 successive readings of the storybook, another videotape of the children reading the now familiar storybook with their mothers was made, and interactions were coded and analyzed for changes. A time frame of 3 weeks was used to control for developmental changes in child language abilities as alternative explanations for changes in child behavior. Analysis of group differences showed that mothers tended to initiate fewer extra-textual discussions with the familiar book than with the unfamiliar book, while their children concurrently initiated significantly more discussions with the familiar storybook than with the unfamiliar storybook. Three of the children assumed a more equal share of the conversation when sharing the familiar book versus the unfamiliar book. Children's lexical diversity increased significantly over the 3 weeks. In terms of individual differences, mothers varied widely on their use of decontextualized language to scaffold interactions during reading. Results were consistent with a dynamic systems perspective in which the child's competencies, the adult's scaffolding efforts, and the demands of the specific task are dynamically assembled through interactions in the context of storybook reading. (Author/KDFB)

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CHANGES IN MATERNAL/CHILD DISCOURSE ACROSS REPEATED STORYBOOK READINGS

Biennial Meeting of the Society for Research in Child Development
Washington, D.C.
April 5, 1996

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Abstract

This pilot study examined changes in maternal/ child discourse behaviors across repeated readings of a storybook from a dynamic systems perspective. Four Caucasian children (2 boys, 2 girls), ranging in age from 2;7 to 2;10 years old, were videotaped reading unfamiliar storybooks with their mothers. The videotapes were then transcribed, and maternal and child behaviors were coded on several dimensions. After 10 successive readings of the storybook another videotape was made and interactions were coded and analyzed for changes. Analysis of group differences showed that mothers tended to initiate fewer extratextual discussions with the familiar book while their children concurrently initiated significantly more discussions with the familiar material ($t=4.6$, $p<.05$). In terms of individual differences, mothers varied widely on their use of decontextualized language to scaffold interactions during reading. Results are consistent with a dynamic systems perspective of development (Thelen and Smith, 1994) in which the child's competencies, the adult's scaffolding efforts, and the demands of the specific task are dynamically assembled through interactions in the context of storybook reading.

Introduction

Many recent studies have looked at the parent-child interactions that occur during joint reading of novel and familiar storybooks. Some have examined group differences (Phillips & McNaughton, 1990), while others have focused on individual differences in maternal style (Haden, Reese, & Fivush, 1996).

To date, there has been no all encompassing theoretical foundation proposed to explain the diverse array of findings in studies of parent-child interactions during joint storybook reading. Dynamic systems theory (Thelen & Smith, 1994) provides such a framework in which these findings can be integrated.

From this perspective, scaffolding behaviors are used by adults as extrinsic control parameters to facilitate child participation in the task environment of joint storybook reading. Mothers appear to choose scaffolding behaviors (control parameters) based on their children's existing levels of competence and the specific task environment. Maternal control parameters then combine with the child's existing abilities (organismic variables) to create behavioral performance (e.g. more sophisticated discourse behaviors) unique to the specific task environment.

The specific task environment is defined by both the context and the nature of the task. In this study the context (joint storybook reading) was consistent across time, while the nature of the task changed from time 1 to time 2 (novel book at time 1, familiar book at time 2).

A restricted time frame (3 weeks) was employed to control for developmental changes in child language abilities as alternative explanations for any observed changes in child behavior.

Purpose

The purpose of the present pilot study was to extend and integrate the diverse array of findings in studies of maternal/child interactions during joint storybook reading within a dynamic systems perspective.

Hypothesis

The dynamic interaction of child abilities and maternally structured control parameters within the task environment of reading a progressively more familiar book will lead to measurable changes in child discourse behaviors.

Method

Subjects:

Subjects were four white middle to upper middle class mother-child dyads. Individual child characteristics are given in Table 1.

Table 1.

Child characteristics

Child	Gender	C.A.	Vineland	Maternal education
1	F	2;10	119	16
2	F	2;7	92	16
3	M	2;8	105	16
4	M	2;10	85	16+

Procedure:

Mother-child pairs were videotaped at time 1 in their homes reading three unfamiliar storybooks provided by the examiner. All three books were left with each pair and the mother was asked to read at least one of the books a minimum of ten times over the course of two weeks. Another videotape was then made at time 2 of the pair reading the now familiar storybook. Videotapes were transcribed using the CHAT system (MacWhinney, 1991).

Measures:

Child language abilities: Vineland Adaptive Behavior Scales, Communication sub-domain (Sparrow, Balla, & Cicchetti, 1984)

Maternal control parameters:

Topic control: A modification of the coding system described by Tannock (1988) was used to code maternal utterances for topic control. Extratextual comments were classified as either Initiations, Continuations, or Responses. Initiations included the introduction of new topics, attempts at eliciting completion of text, and initiation of routines such as counting. Continuations included return to a previously introduced topic or maintenance of a topic with no intervening turn by the partner. Responses included any response to the speaker with the same topic, completion of elicited text upon request, and engagement in counting or other routines upon request.

Turn control: Mean length of child to maternal turn ratios were calculated (Pan, 1994). As this ratio approaches 1 the partners are each taking a more equal share of the conversation.

Use of decontextualized language: A modification of the coding system described by De Temple (1994) was used to code for the use of decontextualized language. Immediate utterances included labeling, counting, paraphrasing, and any comments or questions about information immediately available on the page. Non-immediate utterances included explanations, inferences, predictions, and real world connections.

Task Environment: At time 1 a novel book was read by the dyad. At time 2 the same book had been read at least 10 times and was thus defined as being familiar to both partners.

Child discourse behaviors:

Topic control: Modification of Tannock coding scheme (see above)

Turn control: Mean length of turn ratios (see above)

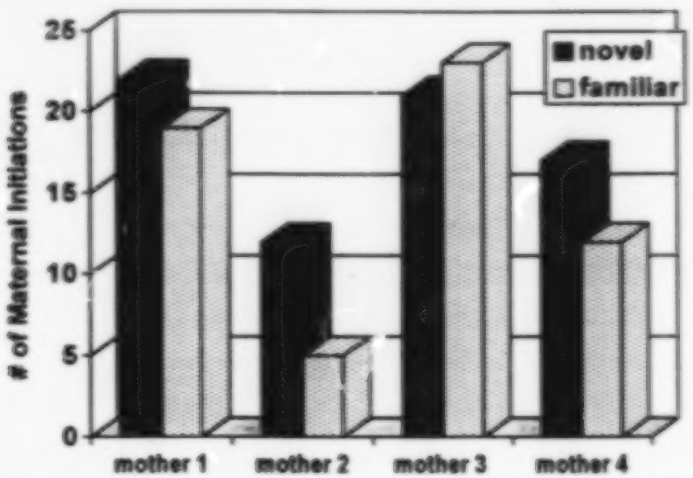
Lexical diversity: The number of different words (NDW) used by the child during interactions was calculated (Pan, 1994)

Use of decontextualized language: Modification of DeTemple (1994) coding scheme (see above)

Results

Maternal control parameters:

Topic control:



Three out of four mothers initiated fewer interactions when reading the familiar book.

Turn control: Three out of four MLT ratios increased from time 1 (novel book) to time 2 (familiar book) (Table 2), indicating that mothers shared conversational responsibility more equally with their children when reading the familiar book.

Table 2.

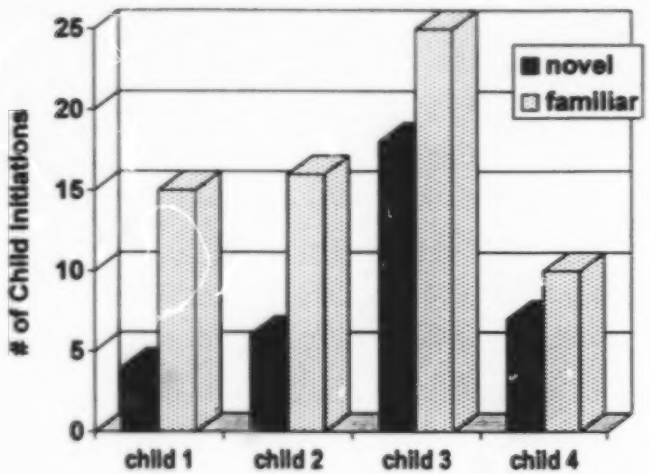
Mean Length of Turn Ratios

Dyad	Novel	Familiar
1	0.182	0.541
2	0.250	0.542
3	0.234	0.320
4	0.229	0.167

Child discourse behaviors:

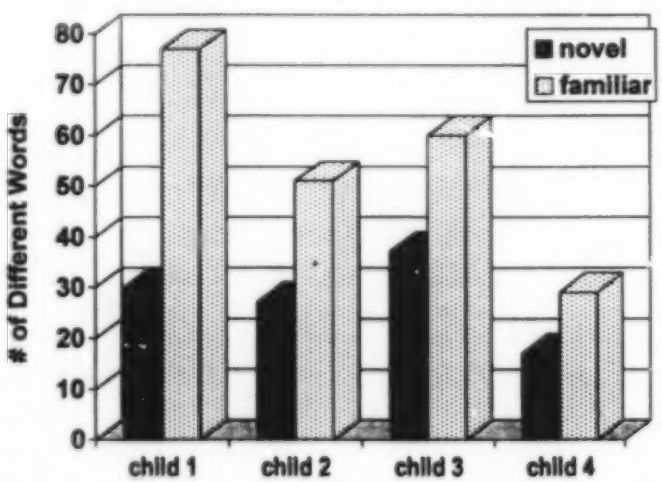
Turn control: 3 of 4 children assumed a more equal share of the conversation when sharing the familiar book, as indicated by increasing child/mother Mean Length of Turn ratios (Table 2)

Topic control:



Children initiated significantly more extratextual comments while sharing the familar book with their mothers ($t=4.6$, $p<.05$).

Lexical diversity:



Children used a significantly greater number of different words during joint reading of the familiar storybook, reflecting a richer lexicon at time 2 ($t=3.6$, $p<.05$).

Use of decontextualized language:

Significant overall trends were not seen for the use of decontextualized language by mothers and children. Instead, marked individual differences in the quantity of non-immediate utterances and in the changes in use of non-immediate utterances across readings were seen. These differences are summarized in Table 3.

Table 3.

Proportions of Immediate and Non-immediate utterances used by children and mothers

	Immediate		Non-immed.	
Speaker	novel	familiar	novel	familiar
M1	71 7	75.6	28.3	24.4
C1	79.5	78.5	20.5	21.5
M2	95.8	95.4	4.2	4.6
C2	95.8	94.0	4.2	6.0
M3	87.1	68.9	12.9	31.1
C3	90.0	71.0	10.0	29.0
M4	51.4	90.0	48.6	10.0
C4	64.3	100.0	35.7	0.0

Additionally, for the 2 children who used more than 10% non-immediate utterances during both the novel and familiar book, the proportion of non-immediate utterances that were initiated by the child increased markedly (Table 4).

Table 4.

Proportions of Non-immediate utterances initiated by children

	Novel		Familiar	
Dyad	Initiations	Responses	Initiations	Responses
1	0	100	44	56
3	50	50	53	47

Discussion

Results of this pilot study suggest that measurable changes in child discourse behavior did take place as a shared storybook became more familiar. Not only did children take more turns while sharing the familiar book, but they initiated more of the turns themselves, rather than simply responding to overtures by their mothers. Child lexical diversity also increased significantly within the restricted time frame of the study.

From a Dynamic Systems perspective, how was this more active role facilitated by the mothers? It appears that the mothers in this study used a variety of control parameters to encourage greater participation by their children with the familiar material. As a group mothers tended to initiate relatively fewer extratextual utterances while reading the familiar book. Instead of being primarily responsible for maintenance of conversations related to the storybook, mothers shared conversational responsibility more equally with their children when sharing the familiar story.

Individual differences in choice of control strategies also appeared to be present, specifically in the use of decontextualized language. Mothers 1 and 3, for example, used an average of 24% non-immediate utterances across novel and familiar settings. Their children moved from using non-immediate

utterances primarily in response to their mothers to initiating a larger proportion of non-immediate responses themselves.

Mother 2 used only 1 non-immediate utterance during each of the readings, indicating that the use of decontextualized language is currently not being chosen as a control parameter with which to encourage child participation. Mother 4, on the other hand, made extensive use of non-immediate utterances while sharing the novel book with her child. In addition, she made use of paraphrasing, rather than reading the text of the novel book verbatim. This strategy appeared to be specifically geared to the initial status of her child, who was the most limited of the group in terms of expressive language skills. When reading the familiar book, this mother then moved to reading the text verbatim, while her child participated more actively by anticipating upcoming text and echoing the mother as she read. Their use of non-immediate utterances thus decreased markedly.

Because this was a pilot study, results are only suggestive of trends that may be verified using a larger sample. Measurable changes in child discourse behavior were noted as a shared storybook became progressively more familiar. Both group trends and individual differences in the use of maternal control parameters were also found. Thus, it appears that dynamics systems theory may be a viable framework within which a variety of findings from studies of maternal/child interactions during joint storybook reading can be integrated.

References

Fogel, A., & Thelen, E. (1987). Development of early expressive and communicative action: reinterpreting the evidence from a dynamic systems perspective. Developmental Psychology, 23(6), 747-761.

Haden, C.A., Reese, E., & Fivush, R. (1996). Mothers' extratextual comments during storybook reading: stylistic differences over time and across texts. Discourse Processes, 21, 135-169.

MacWhinney, B. (1991). The CHILDES Project: Tools for analyzing talk. Hillsdale, NJ: Lawrence Erlbaum Associates.

Pan, B. (1994). Basic measures of child language. In Sokolov, J. & Snow, C. (Eds.), Handbook of Research in Language Development using CHILDES (pp. 26-49). Hillsdale, NJ: Erlbaum.

Phillips, G., & McNaughton, S. (1990). The practice of storybook reading to preschool children in mainstream New Zealand families. Reading Research Quarterly, 25, 196-212.

Sparrow, S., Balla, D., & Cicchetti, D. (1984). Vineland Adaptive Behavior Scales. Circle Pines, MN: American Guidance Services.

Tannock, R. (1988). Mothers' directiveness in their interactions with their children with and without Down syndrome. American Journal on Mental Retardation, 93(2), 154-165.

Thelen, E., & Smith, L. (1994). A dynamic systems approach to the development of cognition and action. Cambridge, MA: MIT Press.